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SEQUENCE LISTING

<110> Chesnut, Jonathan D.  
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Madden, Knut  
Gleeson, Martin  
Fan, James  
Brasch, Michael A.  
Cheo, David  
Hartley, James L.  
Byrd, Devon R.N.  
Temple, Gary F.

<120> Methods and Compositions for Synthesis of Nucleic Acid Molecules Using Multiple Recognition Sites

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<150> US 60/385,613  
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<211> 5543  
<212> DNA  
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<223> Nucleotide sequence of plasmid pcDNA3.2/V5/GWD-TOPO  
  
<220>  
<221> unsure  
<222> (958)..(966)  
<223> N can be any nucleotide: a, t, c, g  
  
<400> 72

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<211> 5173  
<212> DNA  
<213> artificial sequence

<220>  
<223> Nucleotide sequence of plasmid pcDNA6.2/V5/GWD-TOPO

<220>  
<221> unsure  
<222> (958) .. (966)  
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<210> 74  
<211> 69  
<212> DNA  
<213> artificial sequence  
  
<220>  
<223> Partial sequence of pENTR/SD-dTOPO  
  
<220>  
<221> unsure  
<222> (64)..(69)  
<223> N can be any nucleotide: a, t, c, g

<400> 74  
ttgtacaaaa aaggcaggctc cgccggccgccc ttgtttaact ttaagaagga gcccttcacc 60  
atgnnnnnn 69

<210> 75  
<211> 52  
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<220>  
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<400> 75  
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<210> 76  
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<220>  
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<400> 76  
ggccgcccccc ttcaccgact atgtacagtt g 31

<210> 77  
<211> 28  
<212> DNA  
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<220>  
<223> Nucleotide sequence of TOPO-D75

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<210> 78  
<211> 14  
<212> PRT  
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<220>  
<223> Partial amino acid sequence of pENTR-dTOPO and  
pcDNAGW-dTOPO

<400> 78

Leu Tyr Lys Lys Ala Gly Ser Ala Ala Ala Pro Phe Thr Met  
1 5 10

<210> 79  
<211> 13  
<212> PRT  
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<220>  
<223> Partial amino acid sequence of pENTR/SD-dTOPO,  
pENTR-dTOPO, and pcDNAGW-dTOPO

<400> 79

Lys Gly Gly Arg Ala Asp Pro Ala Phe Leu Tyr Lys Val  
1 5 10

<210> 80  
<211> 15  
<212> DNA  
<213> artificial sequence

<220>  
<223> Product of binding a topoisomerase to part of a nucleic  
acid molecule

<220>  
<221> unsure  
<222> (13)..(15)  
<223> N can be any nucleotide: a, t, c, g

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<210> 81  
<211> 15  
<212> DNA  
<213> Unknown

<220>  
<223> 15 bp core region of the wildtype att site

<400> 81  
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<210> 82  
<211> 21  
<212> DNA  
<213> Unknown

<220>  
<223> att site

<400> 82  
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<210> 83  
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<210> 84  
<211> 233  
<212> DNA  
<213> Unknown

<220>  
<223> attP1 site

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tacaggtcac taataccatc taagtagttg attcatagtg actggatatg ttgtgtttta 60  
cagtattatg tagtctgttt tttatgcaaa atctaattta atatattgtat atttatatca 120  
ttttacgttt ctcgttcagc tttttgtac aaagttggca ttataaaaaaa gcattgctca 180  
tcaatttgtt gcaacgaaca ggtcaactatc agtcaaaaata aaatcattat ttg 233

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tgcttttta taatgccaac tttgtacaaa aaagcaggct 100

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aatttagattt tgcataaaaa acagactaca taatactgta aaacacaaca tatccagtca 120  
ctatg 125

<210> 87  
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<400> 87  
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<210> 88  
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<212> DNA  
<213> Unknown

<220>  
<223> attP0 site site

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27

<210> 89  
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27

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27

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27

<210> 92  
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<400> 92  
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27

<210> 93  
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<210> 94  
<211> 25  
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<220>  
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<400> 94  
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<210> 95  
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<400> 95  
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<210> 96  
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<400> 96  
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<210> 97  
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<400> 97  
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<210> 98  
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<400> 98	
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<210> 99	
<211> 27	
<212> DNA	
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<400> 99	
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<210> 100	
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<210> 101	
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<210> 103	
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<400> 103	
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<210> 104  
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<212> DNA  
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<220>  
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<400> 104  
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24

<210> 105  
<211> 25  
<212> DNA  
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<220>  
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<400> 105  
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25

<210> 106  
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<400> 106  
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22

<210> 107  
<211> 27  
<212> DNA  
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<400> 107  
gttcaacttt tgtataaaaa gttggca

27

<210> 108  
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<220>  
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<400> 108  
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24

<210> 109

<211> 25  
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<400> 112  
caactttttc gtacaaagtt ggca 24

<210> 113  
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<210> 114  
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<213> Unknown  
  
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<210> 125  
<211> 42  
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<220>  
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<400> 125  
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<210> 126  
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<220>  
<223> Oligonucleotide linker

<400> 126  
caacactatc ggaata 16

<210> 127  
<211> 24  
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<220>  
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<400> 127  
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<210> 128  
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<220>  
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<400> 128  
ggaggagcaa tgatottgat cttc 24

<210> 129  
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<210> 130  
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<400> 130  
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<210> 131  
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<400> 131  
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<210> 132  
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<400> 132  
ttattttgttag agctcatcca tgcca 25

<210> 133  
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<220>  
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<400> 133  
gatgactcgtaatacgactc actataggg 29

<210> 134  
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<220>  
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<400> 134  
gatgactcgtaatacgactc acta 24

<210> 135

<211> 11  
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<220>  
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<400> 135  
ggccataagg g 11

<210> 136  
<211> 11  
<212> DNA  
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<220>  
<223> 3' end of Element 1

<400> 136  
gttccgaagg g 11

<210> 137  
<211> 11  
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<220>  
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<400> 137  
ggcctaaagg g 11

<210> 138  
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<220>  
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<400> 138  
cgaaacaaat tgaaattctt cctcgaaaag tgg 33

<210> 139  
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<212> DNA  
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<220>  
<223> TOPO-D70 5' end

<400> 139  
ctgatacatg tc 12

<210> 140  
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<213> Unknown

<220>

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<221> misc\_feature

<222> (43)..(48)

<223> n is a, c, g, or t

<400> 140  
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<210> 141

<211> 12

<212> DNA

<213> Unknown

<220>

<223> TOPO-D74 5' end

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cgggggaagt gg 12

<210> 142

<211> 45

<212> DNA

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<221> misc\_feature

<222> (1)..(6)

<223> n is a, c, g, or t

<400> 142  
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<210> 143

<211> 14

<212> DNA

<213> Unknown

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<223> F7220 Primer

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tcgaaaggcc cctt 14

<210> 144

<211> 14

<212> DNA

<213> Unknown

<220>  
<223> F6682 Primer

<400> 144  
ggccaagggc cctt

14

<210> 145  
<211> 11  
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<220>  
<223> F8417 Primer

<400> 145  
gttccgaagg g

11

<210> 146  
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<212> DNA  
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<220>  
<223> F8418 Primer

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cggaacaagg gccctt

16

<210> 147  
<211> 16  
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<220>  
<223> F8420 Primer

<400> 147  
taggccaagg gccctt

16

<210> 148  
<211> 11  
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<223> F8419 Primer

<400> 148  
ggcctaaagg g

11